



Climate Adaptation Plan Interim Update 2014
FINAL

June 2014

NCPC Contact:

Amy Tarce, Community Planner
(202)482-7241
amy.tarce@ncpc.gov

1. Policy Framework for Climate Change Adaptation

While the scope, severity, and pace of future climate change impacts are difficult to predict, it is clear that potential changes could have important impacts on the federal government's sites, buildings, and operations. Adaptation planning will allow the National Capital Planning Commission (NCPC) to minimize the negative impacts of climate change that are already occurring in the National Capital Region and take advantage of opportunities to coordinate and respond effectively.

NCPC's mission is to protect and enhance the extraordinary historical, cultural, and natural resources of the National Capital Region by crafting long-range plans, analyzing emergent planning issues, reviewing site development and building proposals, and monitoring federal capital investment. NCPC's strategic goals are as follows.

Goal 1: Crafting plans and policies that employ the highest standards of urban design and planning to define the federal government's interest in the National Capital Region's long-term development.

Goal 2: Review proposals subject to Commission approval or advice to determine whether they are consistent with the federal interest.

Goal 3: Inform the public of NCPC's activities, encourage citizens to become involved in the planning process, and participate in broader professional discussions at local, national, and international levels.

Goal 4: Build consensus and facilitate cooperation among citizens, public interest groups, nongovernmental organizations, and governmental agencies to shepherd plans and policies toward fruition.

Goal 5: Embrace the best practices for the continual development of its human resources, work processes, and technology to respond to the National Capital Region's changing planning needs.

NCPC will consider potential climate change impacts as it meets all strategic goals, and commits to climate change adaptation planning using the best available science and information.

NCPC will update its agency-wide Climate Adaptation Plan (Adaptation Plan or Plan) per Executive Order 13514 and Executive Order 13653, as well as two guidance documents, the *2011 Implementing Instructions for Federal Agency Climate Change Adaptation Planning* and the 2013 CEQ Guidance document *Preparing Federal Agency Climate Change Adaptation Plans in Accordance with Executive Order 13653*. The Plan will incorporate the findings and directives of these policy and guidance documents.

NCPC's senior sustainability officer is responsible for ensuring implementation of all aspects of this Plan.

Purpose of Climate Adaptation Policy

The agency's Adaptation Plan will identify how climate change may impact NCPC's ability to achieve its mission and will prioritize actions to reflect current and future climate change risks and opportunities for adaptation. NCPC will also consider climate change adaptation opportunities when updating the *Comprehensive Plan for the National Capital* (Comprehensive Plan), reviewing federal plans and projects, and monitoring federal capital improvement projects. This will facilitate protection of federal assets and investments, ensure the long-term resiliency of federal operations, and support economic vitality in the National Capital Region.

i. Identification and Assessment of Climate Change Related Impacts and Risks

In 2013, NCPC partnered with NASA, GSA, the Smithsonian Institution and the Metropolitan Washington Council of Governments (MWCOC) to hold a series of workshops on climate change vulnerability in the National Capital Region, focused on areas with the highest concentration of federal assets. Preliminary assessments identified sea level rise with storm surges, extreme precipitation, and heat waves to have a range of near term and long term impacts to the region's built systems, natural resources, workforce and economy. A summary report of the vulnerability assessments will be available in June 2014.

Sea-level rise

Sea-level rise and variability in weather events is likely to exacerbate the frequency and intensity of river, urban drainage and storm surge flooding. Even water rise of a few feet would exacerbate the effects of storms, tides, or floods and increase potential damage. Areas with the potential for significant effects include low-lying areas in Washington, DC and locations along water bodies, including the Anacostia and Potomac Rivers. Vulnerability to threats associated with rising sea levels is compounded by high population densities along coastal areas and rivers leading to major estuaries, such as the Chesapeake Bay.

Extreme precipitation

While predicting trends in annual rainfall is difficult, NASA's climate scientists believe the Washington, DC region will experience more frequent heavy (but short duration) rainfall events annually. The Federal Triangle, Rock Creek Park and the Tidal Basin area near the National Mall have been known to flood due to extreme rain events in the past. Constitution Avenue is prone to flooding even during small rain events. These federally owned and managed areas will be susceptible to flooding more frequently due to climate change in the next 30 to 50 years.

Extreme heat

Extreme heat was deemed to have minor effects in the short term and moderate impacts in the long term, assuming that average temperatures will continue to rise over time. Extreme heat will not significantly impact federal government operations and workforce health due to the availability of appropriate technology, such as redundancy in the power supply and ability to moderate peak electricity loads at short notice. However, heat waves can significantly impact the region's transportation infrastructure, impeding workforce ability to commute to and from work. Extreme heat, which can significantly impact agriculture, native vegetation and natural habitats, is less of a concern also due to the highly urbanized nature of the national capital.

There are many federally-owned properties vulnerable to climate change impacts in the Washington, DC region, including parkland, military installations, museums and agency headquarters. In addition to federal operations and properties, many federal sites also house national treasures and important documents of national significance. Some of these facilities include the National Archives; the Smithsonian Institution museums; the headquarters of the Internal Revenue Service, the Environmental Protection Agency, the U.S. Department of Commerce, and the U.S. Department of Justice; and four military installations: the Pentagon, the Washington Navy Yard, the Naval Research Laboratory, and Joint Base Anacostia-Bolling.

Long term climate change may also affect the form of the city and the integrity of the Plan of Washington. The Plan of Washington has been the basis of the street grid and the urban development pattern in Washington since the establishment of the capital in 1791. For instance, views to national memorials, the White House, and the U.S. Capitol may be permanently altered if large scale infrastructure solutions are constructed in the vicinity of the National Mall as a way to mitigate flooding in these low-lying areas.

Risks and opportunities to NCPC’s mission, programs, and operations from climate change include the following.

Climate Change Impact	Relevance to NCPC’s work/strategic goals
<ul style="list-style-type: none"> • More frequent flooding 	<p>Each of these impacts could have an effect on the federal development projects that NCPC reviews and on NCPC’s long range planning initiatives.</p> <p>While applicant agencies are responsible for any particular project, NCPC has the authority to review the project and ensure that it is consistent with the Comprehensive Plan’s goals and objectives. These include addressing the impacts of climate change.</p>
<ul style="list-style-type: none"> • Increased levels of pollutants in runoff 	
<ul style="list-style-type: none"> • Soil erosion 	
<ul style="list-style-type: none"> • Increased stormwater runoff 	
<ul style="list-style-type: none"> • Average temperature rise 	
<ul style="list-style-type: none"> • Effects on tree viability and vegetation (in urban areas) 	<p>It is also important for NCPC to address climate change impacts in its long range planning projects and initiatives.</p>
<ul style="list-style-type: none"> • Shortage of water supply by 2050 in the National Capital Region 	
<ul style="list-style-type: none"> • Extreme weather events 	<p>An extreme weather event could impact NCPC’s operations because it might make it difficult for employees to commute to work. It could also make it difficult for the public to attend Agency meetings because public transportation may be impacted.</p>

Agency adaptation planning and evaluation process

NCPC staff will update the Agency Climate Adaptation Plan every year. This process will coincide with the development of the upcoming fiscal year’s work plan. Because the agency is relatively small (37 people), NCPC has the flexibility to solicit agency-wide input as issues (such as climate change impacts that could affect the agency mission) arise and need to be addressed quickly.

ii. Programs, policies and plans to manage climate risks and build resilience in the near term. (Please refer to Attachment A: NCPC Adaptation Plan Elements)

Over the past few years, NCPC has integrated climate change adaptation into its programs, policies, and operations. In the near term, NCPC will continue to identify opportunities to incorporate climate adaptation policies in each 3 core functions:

Comprehensive Planning

NCPC will continue to encourage federal actions and decisions that enable the federal government to manage climate change risks in the National Capital Region. The 2014 updates to the Federal

Environment Element of the Comprehensive Plan will reflect Executive Order 13653 requirements for adaptation planning.

Plan and Project Review

NCPC will use its submission guidelines, its policies and procedures, and the Comprehensive Plan for the National Capital to require federal agencies to identify their climate change risks and describe adaptation measures considered in the plans and projects submitted to NCPC for review.

Special Initiatives

NCPC will consider climate adaptation strategies when preparing plans and initiatives that address current planning needs of the federal government in the National Capital.

- NCPC continues to play a critical role in coordinating federal and District stakeholders to develop improvements for the Potomac Park Levee across 17th Street, NW that would meet federal standards and be appropriate to the culturally and historically important grounds of the National Mall. Construction of the levee is underway and scheduled for completion in May 2014.
- In April 2013, NCPC formed the Monumental Core Climate Adaptation Working Group to coordinate climate adaptation activities among federal, local and regional agencies. The group serves as a central body for the exchange of climate information, education and collaboration in climate change initiatives. There are 25 agencies represented in this working group.

In February 2014, NCPC hosted a visioning workshop sponsored by the US Army Corps of Engineers (USACE) for the Working Group members to provide input to the North Atlantic Coast Comprehensive Study (NACCS) for Washington, DC, which will be incorporated into the USACE's final NACCS report to Congress.

- In 2013, NCPC finalized the *SW Ecodistrict Plan* which addresses how a precinct of mostly federal buildings and related infrastructure in Washington, DC can function together to reduce energy and water consumption; move toward zero-net energy as measured in carbon; manage stormwater; and reduce the federal government's operating costs. It demonstrates how to maximize efficient use of valuable urban land; increase development capacity and mix of uses; improve access, mobility, and walkability; and establish a more attractive and engaging public realm.
- In 2013, NCPC completed the SW Ecodistrict Stormwater Infrastructure Study. The Study looks at the financial and technical feasibility of a district water system for the SW Ecodistrict area south of the National Mall. The system allows for capture and reuse of all the area's stormwater through the placement of cisterns under 10th Street, SW. It also includes strategies to make the area a zero net water district by tapping well water for potable water and replenishing it with treated greywater.

iii. Addressing significant climate change related risks that can impair NCPC's statutory mission or operation

NCPC's mission will not be impaired significantly by the climate change related risks described above.

iv. Considerations to improve climate adaptation and resilience, including the costs and benefits of such improvement, with respect to agency suppliers, supply chain, real property investments, and capital equipment purchases such as updating agency policies for leasing, building upgrades, relocation of existing facilities and equipment, and construction of new facilities

NCPC does not own real property or fund capital projects. However, NCPC can facilitate and encourage other federal agencies to improve their climate resilience by:

- using the Comprehensive Plan to support federal projects in the National Capital Region that are included in the agencies' adaptation plan priority action lists; and
- using the project review process to consider climate change risks and adaptation opportunities.

As organizations develop more information regarding climate change in the National Capital Region, NCPC will continue to incorporate relevant findings into the Comprehensive Plan, the agency's plan review process, and its long range planning activities.

v. Interagency coordination efforts to support climate preparedness and resilience at all levels of government

NCPC continues to lead and facilitate interagency coordination and collaboration efforts to address climate adaptation in the National Capital Region. Through its review authority over federal projects, NCPC already has a process that requires applicants to coordinate with other affected federal agencies and local communities on issues that affect external stakeholders. In the past, these issues focused on transportation, urban design and public safety. NCPC will add climate change adaptation as a future focus area.

In addition to its leadership role in the Monumental Core Climate Adaptation Working Group, NCPC:

- continues to expand its influence in climate adaptation knowledge exchange, building upon the findings of the 2012 Federal Triangle Stormwater Drainage Study. NCPC has served as a resource regarding the federal government's efforts to solve the flooding issues in the monumental core of Washington, DC.
- contributed to the regional Climate Adaptation Guide being developed by the EPA for the Metropolitan Washington Council of Governments (MWCOC). This initiative was started in 2011 and completed in late 2013.
- partnered with NASA, GSA, the Smithsonian Institution and MWCOC to conduct a series of webinars and workshops in climate change vulnerability and risk analysis for stakeholders in Washington, DC and Alexandria and Arlington, Virginia. In 2013, these capacity-building activities focused on built systems. In 2014, the US Global Change Research Program joined the partnership, and the partners held a second round of webinars and workshops focused on workforce, communities and natural systems.

NCPC has increased its participation in interagency initiatives related to climate adaptation since 2013. In addition to its leadership role in the Monumental Core Climate Adaptation Working Group, NCPC is an active member of:

- a federal interagency initiative, the Department of Homeland Security Interagency Security Committee Climate Adaptation Working Group;
- an intergovernmental organization in the National Capital Region, the MWCOG' Climate, Energy and Environment Policy Committee; and
- the District of Columbia Flood Risk Management Team (a.k.a. DC Silver Jackets). The Silver Jackets is a US Army Corps of Engineers national program that facilitates intergovernmental coordination at the local level to find solutions to flood risks in the nation's capital.

NCPC will also continue to engage with local and regional organizations and agencies (such as the MWCOG, the District of Columbia Government, the Urban Land Institute, academic organizations, and federal agencies) to stay informed and exchange information.

2. *Modernizing Federal Programs and Policies to Support Climate Resilient Investment*

- Identify and seek to remove or reform barriers that discourage investments or other actions to increase the Nation's resilience to climate change while ensuring continued protection of public health and the environment.**

NCPC has not identified any existing policies that could unintentionally discourage investments or actions by other federal agencies in accomplishing their climate resiliency goals and actions.

- Reform policies and Federal funding programs that may, perhaps unintentionally, increase the vulnerability of natural or built systems, economic sectors, natural resources, or communities to climate change related risks.**

NCPC has not identified any existing policies that could unintentionally result in exposing federal assets to climate change risks. NCPC does not administer any funding programs.

- Identify opportunities to support and encourage smarter, more climate-resilient investments by States, local communities, and tribes, including by providing incentives through agency guidance, grants, technical assistance, performance measures, safety considerations, and other programs.**

NCPC has limited opportunities to support and encourage local climate-resilient investments due to our statutory authority; however, we continue to support smarter local and regional climate resiliency investments through our direct participation in interagency committees and stakeholder meetings organized by regional and local governments. NCPC encourages the practice of leveraging one agency's resources with other relevant and concurrent initiatives by other agencies and helping these groups find synergies that result in greater benefits for the national capital region.